

APPENDIX Q

VISUAL RESOURCE STUDY



North Baja Pipeline, LLC

NORTH BAJA PIPELINE EXPANSION PROJECT

Appendix Q
Visual Resource Study

Prepared by



TETRA TECH EC, INC.

1940 E. Deere Ave. Suite 200
Santa Ana, CA 92705

February 2006

TABLE OF CONTENTS

1.0	INTRODUCTION.....	Q-1
2.0	VRM PROCESS OVERVIEW	Q-3
2.1	VRM Planning Authority.....	Q-4
3.0	B-LINE AND ASSOCIATED FACILITIES.....	Q-7
3.1	VRM Inventory and Evaluation for Palm Springs Field Office BLM Lands (MP 11.7 to 22.3).....	Q-7
3.1.1	Scenic Quality Evaluation	Q-8
3.1.2	Sensitivity Level Analysis.....	Q-11
3.1.3	Distance Zones	Q-13
3.1.4	Determining Interim VRM Class.....	Q-14
3.1.5	Contrast Rating	Q-14
3.1.6	Degree of Contrast.....	Q-15
3.1.7	Key Observation Points for MP 11.7 to 22.3 (Palm Springs BLM Field Office Lands).....	Q-15
3.1.8	Determining Whether VRM Objectives Are Met.....	Q-16
3.2	VRM Evaluation for Yuma BLM Field Office Lands (MP 22.3 - 33.8)	Q-17
3.2.1	Key Observation Points for MP 22.3 to 33.8 (Yuma BLM Field Office Lands)	Q-17
3.2.2	Degree of Contrast.....	Q-17
3.2.3	Determining Whether Visual Management Class Objectives Are Met	Q-18
3.3	VRM Evaluation for El Centro BLM Field Office Lands (MP 33.8 to 79.8).....	Q-19
3.3.1	Key Observation Points for MP 33.8 to 79.8 (El Centro BLM Field Office Lands).....	Q-20
3.3.2	Comparison of KOP Views – 2002 to 2005.....	Q-20
3.3.3	Degree of Contrast.....	Q-21
3.3.4	Determining Whether VRM Objectives Are Met.....	Q-21
3.4	Impact Summary.....	Q-21
3.4.1	B-Line MP 0.0 to 11.7 and Arrowhead Extension	Q-21
3.4.2	B-Line MP 11.7 to 22.3 (Palm Springs BLM Field Office Lands)	Q-21
3.4.3	B-Line MP 22.3 to 29.7 and 31.5 to 33.8 (Yuma BLM Field Office Lands)	Q-22
3.4.4	B-Line MP 29.7 to MP 31.5 (Yuma BLM Field Office Lands).....	Q-22
3.4.5	B-Line MP 33.8 to 79.8 (El Centro BLM Field Office Lands).....	Q-23
4.0	IID LATERAL PIPELINE TO EL CENTRO	Q-24
4.1	Pilot Knob Mesa SQRU (MP 0.0 to 0.5).....	Q-24
4.1.1	Key Observation Points for MP 0.0 to 0.5 (El Centro BLM Field Office Lands).....	Q-25
4.1.2	Degree of Contrast.....	Q-25
4.1.3	Contrast Rating for the Proposed IID Lateral in Pilot Knob Mesa SQRU (MP 0.0 to 0.5)	Q-25
4.1.4	Determining Whether VRM Objectives Are Met.....	Q-26
4.2	Algodones Dunes SQRU (MP 0.0 to 7.9)	Q-26

4.2.1	Existing Scenic Quality.....	Q-27
4.2.2	Existing Sensitivity Levels.....	Q-28
4.2.3	Distance Zones.....	Q-29
4.2.4	Determining VRM Classes.....	Q-29
4.2.5	Key Observation Points.....	Q-30
4.2.6	Contrast Rating for the Proposed IID Lateral in ISDRA SQRU (MP 0.0 to 7.9).....	Q-32
4.2.7	Determining Whether VRM Objectives Are Met.....	Q-33
4.3	East Mesa SQRU (MP 7.9 to 27.6).....	Q-33
4.3.1	Existing Scenic Quality.....	Q-33
4.3.2	Existing Sensitivity Levels.....	Q-34
4.3.3	Distance Zones.....	Q-34
4.3.4	Determining VRM Classes.....	Q-35
4.3.5	Key Observation Points.....	Q-35
4.3.6	Degree of Contrast.....	Q-36
4.3.7	Determining Whether VRM Objectives Are Met.....	Q-37
4.4	Impact Summary.....	Q-37
5.0	ARROWHEAD EXTENSION.....	Q-39
6.0	ABOVEGROUND FACILITIES.....	Q-40
7.0	REFERENCES.....	Q-41

LIST OF TABLES

Table Q-1:	Pipeline Facilities Associated with the North Baja Expansion Project.....	Q-1
Table Q-2:	Aboveground Facilities Associated with the North Baja Expansion Project	Q-2
Table Q-3:	Interim Visual Resource Management Classes.....	Q-6
Table Q-5:	Scenic Quality Inventory and Evaluation Chart	Q-9
Table Q-6:	Scenic Quality Rating Summary for the Existing Pipeline and B-Line Right-of-Way	Q-11
Table Q-7:	Sensitivity Level Rating for B-Line Route	Q-13
Table Q-8:	BLM Rating for B-Line for MP 11.7 to 22.3	Q-14
Table Q-9:	Visual Contrast Rating.....	Q-15
Table Q-10:	KOP Locations for the A-Line and B-Line.....	Q-20
Table Q-11:	VRM Class Designations by Milepost for IID Lateral Pipeline	Q-24
Table Q-12:	KOP Location for the IID Lateral through the Pilot Knob Mesa	Q-25
Table Q-13:	Visual Resource Management Classes of OHV Use and Camping Areas.....	Q-30
Table Q-14:	Key Observation Point Locations in the Algodones Dunes SQRU.....	Q-31
Table Q-15:	Key Observation Point Location for the IID Lateral at East Mesa	Q-35

LIST OF FIGURES

Figure Q-1	Location Map Showing Key Observation Points
------------	---

LIST OF ATTACHMENTS

Attachment A	A-Line (2001) and B-Line (2005) KOP Photos
Attachment B	IID Lateral (2005) KOP Photos

Appendix Q

Visual Resource Study

1.0 INTRODUCTION

The North Baja Pipeline Expansion Project (Project) will construct a new natural gas pipeline to connect with the Gasoducto Bajanorte Pipeline at the U.S.-Mexico border and to the existing North Baja facilities and the El Paso Natural Gas system in Ehrenberg, Arizona. The Project includes three elements: the B-Line, which includes interconnection facilities in Ehrenberg, Arizona, as well as a 79.8-mile, 42- and 48-inch diameter pipeline between Blythe and the Mexican border; the Arrowhead Extension, which includes a meter station and a 2.1-mile, 36-inch diameter pipeline extending from the proposed B-Line at milepost (MP) 7.4 to Southern California Gas Company's (SoCalGas) existing Blythe Compressor Station; and the Imperial Irrigation District Lateral (IID Lateral), a 45.7-mile, 16-inch diameter pipeline between the B-Line and IID's El Centro Generating Station.

The purpose of this report is to evaluate the visual impact of the proposed Project. The specific facilities evaluated in this analysis are listed in Tables Q-1 and Q-2. The location of the Project is shown in Figure Q-1.

Table Q-1: Pipeline Facilities Associated with the North Baja Expansion Project				
Facility	Pipe Diameter (inches)	Approximate Milepost	Length (in miles)	County, State
B-Line				
Colorado River Loop	42	0.0 to 0.5	0.5	La Paz, AZ, Riverside, CA
Mainline Loop	42/48	0.5 to 79.8	79.3	Riverside, CA Imperial, CA
B-Line Total			79.8	
Arrowhead Extension	36	0.0 to 2.1	2.1	Riverside, CA
IID Lateral	16	0.0 to 45.7	45.7	Imperial, CA
Project Total			127.6	

Table Q-2: Aboveground Facilities Associated with the North Baja Expansion Project		
Facility	Approximate Milepost	County, State
B-Line		
Ehrenberg Compressor Station modifications and pig receiver	0.0	La Paz, AZ
Rannells Trap pig launcher and receiver	11.7	Riverside, CA
Mainline Valve #1	0.0	Riverside, CA
Mainline Valve #2	5.7	Riverside, CA
Mainline Valve #3	11.7	Riverside, CA
Mainline Valve #4	11.7	Riverside, CA
Mainline Valve #5	28.0	Imperial, CA
Mainline Valve #6	41.6	Imperial, CA
Mainline Valve #8	75.2	Imperial, CA
Mainline Valve #9	75.2	Imperial, CA
Ogilby Meter Station modifications and pig launcher, receiver	75.2	Imperial, CA
Arrowhead Extension		
Two Taps at the A-Line and B-Line, Crossover Piping, and Pig Launcher	0.0	Riverside, CA
Blythe-Arrowhead Meter Station and Pig Receiver	2.1	Riverside, CA
IID Lateral		
Tap at mainline and pig launcher	0.0	Imperial, CA
IID Lateral Valve #1	0.0	Imperial CA
IID Lateral Valve #2	7.6	Imperial CA
IID Lateral Valve #3	27.2	Imperial CA
IID Lateral Valve #4	38.7	Imperial CA
El Centro Meter Station and pig receiver	45.7	Imperial CA

2.0 VRM PROCESS OVERVIEW

In order to assess visual resource impacts of the Project, it is important to understand the methodology used for the visual impact assessment. Most of the right-of-way crosses lands administered by the Bureau of Land Management (BLM). The BLM has developed a systematic approach to managing scenery and visual resources of landscapes, called the Visual Resource Management (VRM) System (BLM 2000). This system was used for the inventory of visual resources and evaluation of the predicted visual effects that could be created by the Proposed Project.

The purpose of the BLM VRM system is twofold: 1) to manage the quality of the visual environment and 2) to reduce the visual impact of development activities, while maintaining effectiveness in the BLM's resource programs. Managing the visual aspects of changes to the natural landscape is particularly important for the BLM because most activities taking place on BLM-administered lands involve some degree of alteration to the landscape.

The Federal Land Policy and Management Act of 1976 (FLPMA) requires that public lands be managed in a manner that will protect the quality of scientific, *scenic*, historical, ecological, environmental, air and atmospheric, water resources, and archaeological values (43 United States Code 1701). The BLM is concerned with managing visual impact without unduly reducing commodity production or limiting overall program effectiveness.

Because the scenic value and management objectives of public lands vary, it is not practical or desirable to provide a uniform level of visual management for all areas administered by the BLM. The agency has therefore developed a system for evaluating the visual resources of a given area and for determining what degree of protection, rehabilitation, or enhancement is desirable and possible.

The VRM system is an analytical process that identifies, sets, and meets objectives for maintaining scenic values and visual quality. It functions in two ways:

First, for management purposes, the BLM conducts an inventory that evaluates visual resources on all lands under its jurisdiction (*Inventory/Evaluation*). Once inventoried and analyzed, lands are given relative visual ratings (*Management Classification*). The development of Visual Management Classes is not project-specific. It is a general process to identify broad visual objectives for all public lands during land management planning processes.

Visual Management Classes are established through the resource management planning (RMP) process for all BLM-administered lands. During the RMP process, the Class boundaries are adjusted as necessary to reflect the resource allocation decisions made in RMPs. In accordance with BLM Manual 8400 (April 5, 1984), it is BLM policy that "*interim* visual management objectives" are established where a project is proposed and there are no RMP approved Visual Management Classes. These interim objectives are developed using the

guidelines in Manual Section 8410 and must conform to the land use allocations set forth in the RMP, which covers the project area. The establishment of interim VRM objectives will not require a plan amendment unless the project itself requires one.

Secondly, when any development is proposed – whether it is proposed by the BLM itself through its planning process, or by other agencies, or by the private sector – the degree of contrast between the proposed activity and the existing landscape is measured utilizing a methodology called “Contrast Rating”.

The assessment of Project visual resource impacts is presented in four parts: 1) B-Line, 2) IID Lateral, 3) Arrowhead Extension; and 4) aboveground facilities.

2.1 VRM PLANNING AUTHORITY

The North Baja Pipeline Expansion Project will cross public lands administered by three different field offices of the BLM: Palm Springs Field Office (B-Line MP 11.7 to 22.3); Yuma Field Office (B-Line MPs 22.3 to 33.8); and El Centro Field Office (B-Line MPs 33.8 to 79.8, and MPs 0.0 to 27.6 of the IID Lateral). Each of these BLM offices handles visual resource management differently.

Lands crossed by the B-Line under the jurisdiction of the BLM-Palm Springs Field Office, from MP11.7 to 22.3, do not have a formally designated Visual Management Class through the RMP process, and the BLM did not formally correlate Multiple-Use Class designations with VRM classifications (Jim Foote, BLM, 2004). However, since these lands have not been classified by the BLM and are also located within the CDCA, the CDCA Plan requires that each project develop “Interim VRM Classes and Objectives” (BLM 1980). Interim objectives were developed and included in the Visual Resource Study for the 2002 North Baja Project, and a detailed description of the process used to develop Interim VRM Classes was presented for that project. A synopsis of that process follows in this report for MP 11.7 to 22.3.

Visual resource classifications for lands under the jurisdiction of the BLM-Yuma Field Office are outside the CDCA (B-Line MPs 22.3 to 33.8). These lands are designated by the current RMP as Visual Management Class III. (Aaron Curtis, BLM, 2006; BLM 1987). The BLM Yuma Field Office is currently updating their RMP and VRM maps displayed at planning Open Houses have shown the entire California State Route 78 utility corridor as Visual Management Class III. Some surrounding lands have Class II because of extensive cultural resources. The new RMP may be adopted by the end of 2006.

Public lands administered by the BLM-El Centro Field Office (B-Line MPs 33.8 to 79.8) are based directly on the Multiple-Use Class designations developed through the CDCA Plan (Larry Caffey, BLM, 2005; BLM 1980). The Multiple-Use Class – VRM Class associations for lands administered by the El Centro field office are:

- Multiple-Use Class “C” = VRM Class I

- Multiple-Use Class “L” = VRM Class II
- Multiple-Use Class “M” = VRM Class III
- Multiple-Use Class “I” = VRM Class IV

For public lands administered by the BLM-EI Centro Field Office and crossed by the IID Lateral (IID MPs 0.0 to 27.6) Visual Management Classes are based directly on the Multiple-Use Class designations developed through the CDCA Plan (Larry Caffey, BLM, 2005).

Visual Management Classes describe the different degrees of modification allowed to the basic elements of the landscape.

Class I. Natural ecological changes and very limited management activity are allowed. Any contrast created within the characteristic landscape must not attract attention. This classification is applied to wilderness areas, wild and scenic rivers, and other similar situations.

Class II. Changes in any of the basic elements (form, line, color, texture) caused by a management activity should not be evident in the characteristic landscape. Contrasts are seen, but must not attract attention.

Class III. Contrasts to the basic elements caused by management activity are evident, but should remain subordinate to the existing landscape.

Class IV. Any contrast attracts attention and is a dominant feature of the landscape in terms of scale, but it should repeat the form, line, color, and texture of the characteristic landscape.

Class V. This classification is applied to areas where the natural character of the landscape has been disturbed to a point where rehabilitation is needed to bring it up to one of the four other classifications. The classification also applies to areas where there is potential to increase the landscape’s visual quality. It will, for example, be applied to areas where unacceptable cultural modification has lowered scenic quality; it is often used as an interim classification until objectives of another class can be reached.

Table Q-3 (derived from BLM 1986a) was used in 2001 to determine the Interim Visual Management Classes for the North Baja Pipeline. Because these same lands will be crossed by the B-Line from MP 11.7 to 22.3, in the BLM Palm Springs area, this table was used again in this report:

Visual Sensitivity	H	H	H	M	M	M	L
Special Areas	I	I	I	I	I	I	I
Scenic Quality A	II	II	II	II	II	II	II
Scenic Quality B	III	III	III	III	IV	IV	IV
Scenic Quality C	III	IV	IV	IV	IV	IV	IV
Distance Zones	FG/MG	BG	SS	FG/MG	BG	SS	SS

Note: Class V areas are those that have been identified in the VRM planning system which require rehabilitation or enhancement and therefore are not included in the chart above.

On BLM lands the proposed B-Line route crosses VRM Classes II, III, and IV lands (24.9, 23.5, and 6.8 miles, respectively). The IID Lateral crosses VRM Class II lands (20.8 miles) and VRM Class IV lands (4.9 miles).

Table Q-4 displays the various VRM Class objectives by Milepost and by Jurisdiction.

	Milepost	VRM Class)			
		I	II	III	IV
B-Line					
	0.0-0.2	-	-	-	-
	0.2-3.4	-	-	-	-
	3.4-11.7	-	-	-	-
	11.7-14.5	-	-	-	2.7
	14.5 - 14.8	-	-	-	-
	14.8-17.3	-	-	-	2.5
	17.3 - 17.6	-	-	-	0.3-
	17.6 - 18.1	-	-	-	0.5
	18.1 - 18.3	-	-	-	-
	18.3 - 19.3	-	-	-	0.8-
	19.3-22.3	-	-	-	-
	22.3 – 33.8	-	-	4.2	-
	33.8 - 34.5	-	-	0.7	-
	34.5 – 39.6	-	4.9	-	-
	39.6 – 49.0	-	9.1	-	-
	49.0 – 52.0	-	-	3.0	-
	52.0 – 55.1	-	3.1	-	-
	55.1 – 62.0	-	-	6.9	-
	62.0 – 66.0	-	4.0	-	-
	66.0 – 71.3	-	-	4.4	-
	71.3 – 75.5	-	3.8	-	-
	75.5 – 79.8	-	-	4.3	-
IID Lateral					
	0.0 – 2.3	-	2.3	-	-
	2.3 – 7.2	-	-	-	4.9
	7.2 – 27.6	--	18.5	--	-
	27.6 - 45.6	-	-	-	-
Arrowhead Extension					
	0.0-2.1	-	-	-	-
TOTALS		0	45.7	23.5	11.7

3.0 B-LINE AND ASSOCIATED FACILITIES

The B-Line will be located adjacent to the existing A-Line, generally offset 25 feet to the west side. The existing A-Line was approved in 2002 and constructed in spring and summer of 2002. Landscape restoration was completed in fall of 2002. Subsequently in the winter of 2004-2005, precipitation was received in the California Desert that was reported to be of a magnitude of "once-in-100-years." Revegetation of the pipeline right-of-way has been somewhat dramatic because of this precipitation. In order to document the visual effects of the existing pipeline construction activities and the effectiveness of mitigation measures undertaken during the initial phases of construction, operation and maintenance, this Visual Resource Study documents the changes that occurred at each of the eight Key Observation Points of the original mainline pipeline, called the "A-Line." Additionally, photographs were taken to show the visual effects of the mainline construction from the Mexican border to Ehrenberg Compressor Station near Blythe, California. These photographs proficiently show the visual effects of pipeline construction, operation and maintenance in the desert environment, and therefore, aid in the assessment of future visual effects of the proposed Project (see Attachment A).

3.1 VRM INVENTORY AND EVALUATION FOR PALM SPRINGS FIELD OFFICE BLM LANDS (MP 11.7 TO 22.3)

The visual resources inventory consists of a scenic quality evaluation, sensitivity level analysis, and a delineation of distance zones. Based on these three factors, BLM-administered lands from MP 11.7 to 22.3 were placed into one of four visual resources inventory classes. These inventory classes represent the relative value of the visual resources, Class I and II being the most valued, Class III representing a moderate value, and Class IV being of least value from a scenic standpoint. The inventory classes provide the basis for considering visual values in the RMP process.

The California Desert Conservation Area Plan (BLM 1980), as amended, identifies the following actions the BLM will take to effectively manage for activities involving alteration of the natural character of the landscape to some degree:

1. The appropriate levels of management, protection, and rehabilitation of all public lands in the CDCA will be identified, commensurate with visual resource management objectives in the multiple-use guidelines.
2. Proposed activities will be evaluated to determine the extent of change created in any given landscape and to specify appropriate design or mitigation measures using the BLM's contrast rating process.

Because in 2001, Visual Management Classes had not been adopted by the BLM in an RMP for Federal lands crossed by the A-Line, North Baja used BLM methodology to inventory, evaluate and establish Interim VRM objectives. The Visual Resource Management Report prepared by

North Baja and included as an appendix in the 2002 North Baja Pipeline EIS for the A-Line identified Interim VRM objectives utilizing the guidelines set forth in BLM Handbook 8410 (BLM 1986a). These objectives conformed to the land use allocations set forth in the CDCA Plan that covers the Project area. The methodology utilized to develop these interim VRM objectives is explained in the sections below, including scenic quality evaluation, sensitivity levels, and distance zones. A similar approach has been used for the Project facilities from MP 11.7 to 22.3. For areas that have a Visual Management Class objective based on a Multiple-Use Class, there is an explanation of the differences, if any.

3.1.1 Scenic Quality Evaluation

Scenic quality is a measure of the visual appeal of a tract of land. In the visual resource inventory process, public lands are given an A (distinctive scenery), B (common scenery), or C (minimal or low scenic value) rating based on the existing scenic quality which is determined using seven key factors: landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications (see Table Q-5). An important premise of the evaluation is that all public lands have scenic value, but areas with the most variety and most harmonious composition have the greatest scenic value. Another important concept is that the evaluation of scenic quality is done in relationship to the natural landscape. This does not mean that man-made (cultural) features within a landscape necessarily detract from the scenic value. Man-made features that compliment the natural landscape may enhance the scenic value, such as split rail fences or log cabins.

To conduct a scenic quality evaluation, a planning area is subdivided into scenic quality rating units. Rating areas are delineated on the basis of the following:

1. Like physiographic characteristics
2. Similar visual patterns, texture, color, variety, etc. and
3. Areas which have similar impacts from man-made modifications.

The size of a scenic quality rating unit (SQRU) may vary from several thousand acres to one hundred or less acres, depending on the homogeneity of the landscape features and the detail desired in the inventory. Normally, more detailed attention is given to highly scenic areas or areas known to have high sensitivity. The A-Line, which was constructed in 2002, generally is located south of Interstate Highway 10 (I-10) in an east-west direction, then turns south and is located east of State Route 78, and east and then west of State Route 34 both of which lie in a north-south direction.

Table Q-5: Scenic Quality Inventory and Evaluation Chart			
Key Factors	Rating Criteria and Score		
Landform	High vertical relief as expressed in prominent cliffs, spires, <u>or</u> massive rock out-crops; <u>or</u> severe surface variation or highly eroded formations including major badlands or dune systems; <u>or</u> detail features dominant and exceptionally striking and intriguing such as glaciers	Steep canyons, mesas, buttes, cinder cones, and drumlins; <u>or</u> interesting erosional patterns or variety in size and shape of landforms; <u>or</u> detail features which are interesting though not dominant or exceptional.	Low rolling hills, foothills, or flat valley bottoms; <u>or</u> few or no interesting landscape features.
	5	3	1
Vegetation	A variety of vegetation types as expressed in interesting forms, textures, and patterns.	Some variety of vegetation, but only one or two major types.	Little or no variety or contrast in vegetation.
	5	3	1
Water	Clear and clean appearing, still, or cascading white water, any of which are a dominant factor in the landscape.	Flowing, or still, but not dominant in the landscape.	Absent, or present, but not noticeable.
	5	3	0
Color	Rich color combinations, variety or vivid color; <u>or</u> pleasing contrasts in the soil, rock, vegetation, water, or snow fields.	Some intensity or variety in colors and contrast of the soil, rock, and vegetation, but not a dominant scenic element.	Subtle color variation, contrast, or interest; generally mute tones.
	5	3	1
Adjacent Scenery	Adjacent scenery greatly enhances visual quality.	Adjacent scenery moderately enhances overall visual quality.	Adjacent scenery has little or no influence on overall visual quality.
	5	3	0
Scarcity	One of a kind; <u>or</u> unusually memorable, <u>or</u> very rare within region. Consistent chance for exceptional wildlife or wild-flower viewing, etc	Distinctive, though somewhat similar to others within the region.	Interesting within its setting, but fairly common within the region.
	5+	3	1
Cultural modifications	Modifications add favorably to visual variety while promoting visual harmony.	Modifications add little or no visual variety to the area, and introduce no discordant elements.	Modifications add variety but are very discordant and promote strong disharmony.
	2	0	-4

Scenic Quality

A= 19 or more

B= 12-18

C= 11 or less

In 2002, the SQRU for the North Baja Pipeline Route was established, inventoried and evaluated for the then proposed A-Line. Following is a summary of the scenic quality assessment for the pipeline route that was constructed in 2002. Because the B-Line will be built in the same right-of-way (25-feet away from the existing pipeline), the same scenic quality assessment applies to the B-Line as well for MP 11.7 to 22.3.

The dominant view of the landscape through which the right-of-way passes is a flat desert floor, covered with creosote bush scrub and widely scattered desert dry-washes. The majority of

BLM-administered lands under jurisdiction of Palm Springs and crossed by the B-Line are flat to hilly desert landscapes. Background views to the south reveal the Palo Verde Mountain Range in the background of the right-of-way. Following is a detailed discussion of landform, vegetation, water, color, adjacent scenery, scarcity and cultural modifications, which the BLM VRM system utilizes to establish existing scenic quality.

Landform. Regarding landforms, the Palo Verde Mesa generally slopes from west to east into and following the Colorado River drainage, with very little elevation change from MP 11.7 to 22.3. A few minor drainage swales cross the right-of-way corridor, however, no significant elevation change is observed.

Vegetation. The vegetative pattern on the desert floor is expansive areas of widely scattered, low-growing and sparse creosote bush scrub. Other plants observed in scattered locations include ocotillo, cholla, brittlebush, and cacti. In the dry desert washes, linear patterns of desert dry wash woodlands were observed to contain species of palo verde, ironwood, smoke tree (all of which are short, densely branched trees). There is little- or no-contrast in vegetation color or pattern within the SQRU.

Water. Generally, no water was observed within the SQRU during field reconnaissance in September-October 2005. The nearest body of water is the Colorado River, located approximately one-to seven-miles to the east, but the river is not visible from the pipeline route or from State Route 78.

Color. Colors exhibited in the B-Line right-of-way landscape include tan sand flats, brown background mountains and gray-green scrub brush. During months of rainfall in winter and early spring, the hues of green become brighter and create some contrast with the tan sands and desert varnish. Overall, for the majority of the year, there are only subtle color variations, little- to no-visual contrast or interest.

Adjacent Scenery. Regarding adjacent scenery, throughout the entire path of the B-Line, there is little variation from that of barren desert scrub. The scenery directly adjacent to the B-Line right-of-way from MP 11.7 to 22.3 adds minimally to the visual quality of this landscape.

Scarcity. The desert floor scenery crossed by the B-Line is very common within the southeastern region of the California Desert. The landscape has all the typical appearance of desert dominated by creosote scrub and flat desert landscapes. There are no unique or scarce viewsheds crossed by the right-of-way.

Cultural Modifications. Electrical transmission lines on double wooden poles are immediately adjacent to the B-Line right-of-way. Wooden power poles and associated conductors between them extend the entire length of the SQRU. This intrusion on the landscape constitutes a minor impact to the scenery. Some dirt roads have been cut through the SQRU; however, they generally can only be seen when traveling on them or in close proximity. The visual impacts of cultural modifications are restricted to the electric power line corridor, as well as State Route 78 which generally traverses north-south within 4- to 5-miles of the existing A-Line and proposed B-

Line pipeline route. Cultural modifications add little or no visual variety to the area, and introduce only slight discordant elements.

Overall, no exceptionally striking, intriguing, unique, or visually stimulating landforms, vegetative communities, waterbodies, colors, or adjacent scenery landscapes are crossed by the B-Line corridor in MP 11.7 to 22.3.

Utilizing the BLM VRM system, the scenic quality of the B-Line right-of-way is rated as shown in Table Q-6.

Table Q-6: Scenic Quality Rating Summary for the Existing Pipeline and B-Line Right-of-Way		
Key Factor	Possible Rating	B-Line SRQU Rating
Landform	1 to 5	1
Vegetation	1 to 5	1
Water	1 to 5	1
Color	1 to 5	1
Adjacent Scenery	1 to 5	3
Scarcity	1 to 5	1
Cultural Modifications	-4 to 2	0
Total Scenic Quality Score	2 to 32	8

In accordance with BLM Manual Handbook 8410-1 (BLM 1986), the scenic quality of an SQRU with a total score of 8 is “C” meaning low or minimal existing scenic quality.

3.1.2 Sensitivity Level Analysis

Sensitivity levels are a measure of public concern for landscape scenery. Public lands are assigned high, medium, or low sensitivity levels by analyzing the various indicators of public concern. A sensitivity level rating unit (SLRU) is delineated after review of the factors considered discerning public concern; however, there is no standard procedure for delineating SLRUs. The boundaries will depend on the factor that is driving the sensitivity consideration. The factors to be considered in the sensitivity level analysis are as follows:

Type of Users. Visual sensitivity will vary with the type of users. Recreational sightseers may be highly sensitive to any changes in visual quality, whereas workers who pass through the area on a regular basis may not be as sensitive to change.

The users can generally be characterized as individuals who recreate in the winter or reside in the communities of Palo Verde, Yuma, Blythe and El Centro who transit the area. There is a significant amount of vehicular traffic that travels through this vicinity via State Routes 78 and 34. State Route 78 is a connector between Interstate Highway 8 (I-8) and I-10, and State Route

34 is a cut-off through the abandoned Ogilby site to I-8. The dirt roads in the desert valley are used very infrequently. Common recreational opportunities appear to be off-road biking and four wheel driving, as there are signs posted noting that the area is an official OHV area. Workers for the electric utility make use of a dirt road graded to the side of the utility poles and tend to not be sensitive to the surrounding landscape sights.

The Colorado River is located approximately eight to ten miles to the east of the Project.

Where maintenance of visual quality is a major public issue, a rating of high is assigned; where it is a moderate public issue, a rating of moderate is assigned; and where it is a minor public issue, a rating of low is assigned. Given the remoteness of the Palo Verde Mesa and lack of public controversy expressed by residents of Blythe, Yuma or El Centro, it can be concluded that the maintenance of visual quality is a minor public issue. Therefore, the rating for this factor is LOW.

Adjacent Land Uses. For BLM-administered lands from MP 11.7 to 22.3, the land use that surrounds of the Project right-of-way is that of and overhead electrical utility line and open-space desert. There are no agricultural, commercial, residential, or industrial uses anywhere near the B-Line. I-8, to the south, carries people to the nearest cities, which are El Centro, California and Yuma, Arizona. To the north, I-10 carries people to the nearest city, which is Blythe, California. The small community of Palo Verde (population less than 100) is situated near the Imperial-Riverside County line, approximately four miles east of MP 22.3. Very few individuals live in the near vicinity of the Project in the remainder of MP 11.7 to 22.3.

Where maintenance of visual quality to sustain adjacent land use objectives is very important, a rating of high is assigned; where it is moderately important, a rating of moderate is assigned; and where it is slightly important, a rating of low is assigned. Given the uses of lands in the Pilot Knob Mesa, the rating for this factor is low.

Other Factors. All other data, such as research, or studies that include indicators of visual sensitivity, were researched. No other information that includes indicators of visual sensitivity is known to exist relative to the landscapes crossed. The rating for this factor is Low.

Overall Sensitivity Level. The overall sensitivity level is a judgmental process, which requires a careful analysis of all of the sensitivity level factors. The ratings given to each factor are reviewed, and the relationship between factors is analyzed. A high rating in any one factor does not necessarily mean that the overall sensitivity level rating should be high. For example, the rating for type of users might be high but the amount of use might be low. Consequently, the overall rating could be low or moderate.

As with determining the boundaries of the SLRU, the key factor in determining the overall sensitivity level is type of users. The residents of Palo Verde, Blythe, El Centro and Yuma have not expressed any undue concern regarding maintenance of visual quality. The users are sporadic and seasonal, OHV-users, or are simply persons traveling through on State Route 78.

The number of people in the Project area at any one time is very small. Therefore, the overall sensitivity level of the SLRU as shown in Table Q-7 is determined to be low.

Table Q-7: Sensitivity Level Rating for B-Line Route		
Factor	Rating Range	B-Line right-of-way Rating
Type of Users	High / Moderate / Low	Low
Amount of Use	High / Moderate / Low	Low
Public Interest	High / Moderate / Low	Low
Low Adjacent Land Users	High / Moderate / Low	Low
Other Factors	High / Moderate / Low	Low
Overall Sensitivity Rating	High / Moderate / Low	Low

3.1.3 Distance Zones

The visual quality of a landscape may be magnified or diminished by the visibility of the landscape from major viewing routes and key observation points. In the VRM system, therefore, distance zones play a key part in visual resource management.

Landscapes are subdivided into three distance zones based on a relative visibility from travel routes or observation points. The three zones are foreground-midground, background, and seldom seen. Because areas that are closer have a greater effect on the observer, such areas require more attention than do areas that are farther away. Distance zones allow this consideration of the proximity of the observer to the landscape.

Foreground-Midground Zone. This is the area that can be seen from each travel route (highways, use areas, rivers, or other viewing locations) for a distance of 3 to 5 miles where management activities might be viewed in detail. The outer boundary of this distance zone is defined as the point where the texture and form of individual plants are no longer apparent in the landscape. In some areas, atmospheric conditions can reduce visibility and shorten the distances normally covered by each zone. Also, where the foreground-midground zone from one travel route overlaps the background from another route, the foreground-midground designation is used.

Background Zone. This is the remaining area that can be seen from each travel route to approximately 15-miles. Areas in the background which are so far distant that the only thing discernible is the form or outline are not included. In order to be included within this distance zone, vegetation should be visible at least as patterns of light and dark.

Seldom-seen Zone. These are areas that are not visible within the foreground-midground and background zones, and areas beyond the background zones.

The B-Line Route in the Palo Verde Mesa is in the foreground-middleground distance zone. This pipeline route is approximately 2 to 5 miles west of State Route 78 for the majority of the right-of-way on BLM-administered lands. The pipeline right-of-way landscape is not visible because the valley floor is so flat. The slight changes in topography make it so the vast majority of this pipeline route will not be visible at all from most of the miles of highways and county roads. Landscapes visible from these highways can be seen for distances of 15- to 20-miles, or greater, and yet the visual impacts for the existing pipeline right-of-way are very low to non-existent.

3.1.4 Determining Interim VRM Class

Table Q-8 shows the determinations made for the BLM-administered lands crossed by the proposed B-Line from MP 11.7 to 22.3 relative to scenic quality, sensitivity level, and distance zone:

Table Q-8: BLM Rating for B-Line for MP 11.7 to 22.3	
Existing Pipeline and B-Line Route	BLM Rating System
Scenic Quality	Minimal (C)
Sensitivity Level	Low (L)
Distance Zone	Foreground-Middleground (FG/MG)
Interim Visual Resource Management Class	Class IV (Major Modification Is Allowed)

In accordance with the table above, the Interim Visual Resource Management Class for BLM-administered lands crossed by the existing pipeline and the proposed B-Line from MP 11.7 to 22.3 is VRM Class IV. Accordingly, changes in any of the basic elements of form, line, color, or texture caused by the proposed Project may dominate the view and may be the major focus of viewer attention without creating a significant visual effect. The level of change to the characteristic landscape may be high. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements of the visual landscape. This level of modification to the landscape is not demanded, but is allowed without creating a “significant” visual impact, per the definition of significant in NEPA.

3.1.5 Contrast Rating

The contrast rating system is a systematic process used by the BLM to analyze potential visual impacts of proposed projects and activities. The BLM Handbook H-8431-1, Visual Resource Contrast Rating (BLM 1986b), provides necessary guidance to follow when conducting the ratings. It primarily is intended to assist Bureau personnel who are not formally trained in the design-arts to apply the basic principles of design in the resolution of visual impacts. It is not intended to be the only means of resolving these impacts. It should be used as a guide,

tempered by common sense, to ensure that every attempt is made to minimize potential visual impacts.

The basic philosophy underlying visual quality of a landscape depends on the visual contrast created between a project and the existing landscape. The contrast can be measured by comparing the project features with the major features in the existing landscape. The basic design elements of form, line, color, and texture are used to make this comparison and to describe the visual contrast created by the project. The assessment process provides a means for determining visual impacts and for identifying measures to mitigate these impacts.

3.1.6 Degree of Contrast

The rating is completed by determining the degree of contrast (i.e., strong, moderate, weak, or none) for each element. The general criteria and factors in Table Q-9 are used when rating the degree of contrast:

Table Q-9: Visual Contrast Rating	
Degree of Contrast	Criteria
None	The element contrast is not visible or perceived.
Weak	The element contrast can be seen but does not attract attention.
Moderate	The element contrast begins to attract attention and begins to dominate the characteristic landscape.
Strong	The element contrast demands attention, will not be overlooked, and is dominant in the landscape.

3.1.7 Key Observation Points for MP 11.7 to 22.3 (Palm Springs BLM Field Office Lands)

The contrast rating is done from the most critical viewpoints. This is usually along commonly traveled routes or at other likely observation points. Factors that should be considered in selection of key observation points are angle of observation, number of viewers, length of time the project is in view, relative project size, season of use, and light conditions.

Relative to the B-Line from MP 11.7 to 22.3, there were no key observation points established because the existing A-Line right-of-way is not visible from any sensitive viewing location, and therefore, the proposed B-Line right-of-way will not be visible either. Potential sensitive viewing locations that were examined include California State Route 78, numerous county roads, and the village of Palo Verde at the Riverside/Imperial County line. The only vantage points that look into this section of the B-Line are along the utility line access road that follows the overhead electric line (see photo 0050 taken 9/22/05).

Form. Implementation of the proposed B-Line will create few, if any, changes in landform, as it will be constructed 25-feet away from the existing A-Line which was constructed in 2002. Because that right-of-way was recently disturbed by construction of the A-Line, then restored after construction, landforms have been restored to natural appearing conditions. Form contrasts will be weak to none.

Line. Implementation of the proposed B-Line will create no changes in line, as the A-Line and B-Line right-of-ways are contiguous. The right-of-way is not visible from KOPs described above. The existing electric utility is the only above-ground facility near the right-of-way, and the B-Line will be completely below-ground from MP 11.7 to 22.3. Line contrasts will be weak to none.

Color. Implementation of the proposed B-Line will create few, if any, changes in color, as it will be constructed 25-feet away from the existing A-Line which was constructed in 2002. Lighter colored soils, from pipeline construction, are slightly evident when driving on the electric utility access roads, but reveal only weak color contrasts. Orange-colored pipeline markers will be visible at intermittent locations along the pipeline, but will not detract from the visual quality of the area.

Texture. Implementation of the proposed B-Line will create few, if any, changes in texture, as it will be constructed 25-feet away from the existing A-Line which was constructed in 2002. Therefore, only a slight amount of existing desert vegetation will be disturbed during right-of-way expansion. The amount of texture contrast will be weak to none.

For BLM-administered lands from MP 11.7 to 22.3, visual contrasts created by the construction, operation and maintenance of the B-Line will be weak-to-none. Because the land-alteration activities of pipeline construction will not be visible from major viewing areas, and because the existing A-Line did not create any visual contrasts or public objection, there will be little or no visual effects from the B-Line to BLM-administered lands.

3.1.8 Determining Whether VRM Objectives Are Met

These contrast ratings can be evaluated against the Interim VRM Class objectives for MP 11.7 to 22.3. For comparative purposes, the four levels of contrast (i.e., none, weak, moderate, and strong) roughly correspond with VRM Classes I, II, III, and IV respectively. This means that a “strong” contrast rating may be acceptable in a Class IV area, but probably will not meet VRM objectives for a Class III area. In making these comparisons, the cumulative effect of all the contrast ratings must be considered. Certain combinations of ratings may indicate there is a stronger overall contrast than the individual ratings show. For example, several “moderate” ratings when viewed in combination may warrant an overall “strong” rating. This is a judgment determination by the visual resource evaluator.

Though experience in construction of the A-Line, it was learned that all of the contrast ratings for landscape elements were “none” or “weak,” and therefore potential contrast of visual elements (form, line, texture and texture) caused by trenching and backfilling for the pipeline construction

in 2002 did not cause any visual contrasts that were unacceptable after implementation of mitigation measures.

Therefore, based on lessons-learned during construction of the A-Line from MP 11.7 to 22.3, it is the conclusion of this visual resource analysis that the overall contrast rating for the A-Line route is “Weak” to “None”, meaning that the pipeline right-of-way may be seen in some locations but does not attract attention and will meet the objectives of VRM Class II (weak contrast) or that the right-of-way is not visible to the casual observer and will meet the objectives of VRM Class I (no contrast).

Based upon experience gained by constructing the A-Line and the evaluation of this visual resource report, it is the conclusion that construction of the proposed B-Line in the same right-of-way (plus 25-feet of additional temporary construction right-of-way) will result in similar visual effects. Therefore it is the conclusion of this visual assessment that the proposed B-Line right-of-way will be seen in some locations but will not attract attention and will meet the objectives of VRM Class II (weak contrast) or that, in some locations, the right-of-way will not be visible to the casual observer and will meet the objectives of VRM Class I (no contrast).

Consequently, the visual resource management objectives for this Class IV area have been met by the construction that occurred in 2002 and will be met by the proposed the B-Line construction, operation and maintenance.

3.2 VRM EVALUATION FOR YUMA BLM FIELD OFFICE LANDS (MP 22.3 - 33.8)

From MP 22.3 to 33.8, Visual Management Classes have been adopted by the Yuma Field Office of the BLM. Under the current RMP, and under the proposed RMP maps shown at public open houses by the BLM, the B-Line right-of-way is designated as Class III for MP 22.3 to 33.8.

3.2.1 Key Observation Points for MP 22.3 to 33.8 (Yuma BLM Field Office Lands)

The only observation points of the existing A-Line and the proposed B-Line from MP 22.3 to 33.8 are from California State Route 78, which runs in a north-south direction. The pipeline right-of-way is located a distance from the highway, varying from a few-hundred-feet to 1-1/2-miles away. The pipeline and right-of-way crosses under State Route 78 at approximately MP 28.2. Because of the flat terrain, the existing right-of-way does not attract attention, and is not visually evident to passers-by, unless pointed out.

3.2.2 Degree of Contrast

The ratings of visual contrast for the Yuma Field Office BLM Lands are similar to those described above for Palm Springs Field Office BLM Lands.

Form. Implementation of the proposed B-Line will create few, if any, changes in landform, as it will be constructed 25-feet away from the existing A-Line which was constructed in 2002. Because that right-of-way was recently disturbed by construction of the A-Line, then restored after construction, landforms have been restored to natural appearing conditions. Form contrasts will be weak to none.

Line. Implementation of the proposed B-Line will create no changes in line, as the A-Line and B-Line right-of-ways are contiguous. The right-of-way is not visible from KOPs described above. The existing electric utility is the only above-ground facility near the right-of-way, and the B – Line will be completely below-ground from MP 11.7 to 22.3. Line contrasts will be weak to none.

Color. Implementation of the proposed B-Line will create few, if any, changes in color, as it will be constructed 25-feet away from the existing A-Line which was constructed in 2002. Lighter colored soils, from pipeline construction, are slightly evident when driving on the electric utility access roads, but reveal only weak color contrasts. Orange-colored pipeline markers will be visible at intermittent locations along the pipeline, but will not detract from the visual quality of the area.

Texture. Implementation of the proposed B-Line will create few, if any, changes in texture, as it will be constructed 25-feet away from the existing A-Line which was constructed in 2002. Therefore, only a slight amount of existing desert vegetation will be disturbed during right-of-way expansion. The amount of texture contrast will be weak to none.

For BLM-administered lands from MP 22.3 to 33.8, visual contrasts created by the construction, operation and maintenance of the B-Line will be weak-to-none. Because the land-alteration activities of pipeline construction will not attract attention from State Route 78 and there are no other major viewing areas, and because the existing A-Line did not create any visual contrasts or public objection, there will be little or no visual effects from the B-Line in the Yuma Field Office BLM Lands.

3.2.3 Determining Whether Visual Management Class Objectives Are Met

For MP 22.3 to 33.8, these contrast ratings can be evaluated against the Visual Management Class III objectives that were adopted in the 1987 RMP by the Yuma Field Office of BLM (Aaron Curtis, BLM, 2006). Though experience in construction of the A-Line, it was learned that all of the contrast ratings for landscape elements were “none” or “weak,” and therefore potential contrast of visual elements (form, line, texture and texture) caused by trenching and backfilling for the pipeline construction in 2002 did not cause any visual contrasts that were unacceptable after implementation of mitigation measures.

Therefore, based on lessons-learned during construction of the A-Line from MP 22.3 to 33.8, it is the conclusion of this visual resource analysis that the overall contrast rating for the A-line route is “Weak” to “None”, meaning that the pipeline right-of-way may be seen in some locations but does not attract attention and will meet the Visual Management Class II objectives (weak

contrast) or that the right-of-way is not visible to casual observers and will meet the Visual Management Class I objectives (no contrast).

Based upon experience gained by constructing the A-Line and the evaluation of this visual resource report, it is the conclusion that construction of the proposed B-Line in largely the same right-of-way (plus 25-feet of additional temporary construction right-of-way) will result in similar visual effects. Therefore it is the conclusion of this visual assessment that the proposed B-Line right-of-way will be seen in some locations but will not attract attention and will meet the Visual Management Class II objectives (weak contrast) or that, in some locations, the right-of-way will not be visible to the casual observer and will meet the Visual Management Class I objectives (no contrast).

As a result, the Visual Management Class III objectives for this area have been met by the construction that occurred in 2002 and will be met by the proposed construction, operation and maintenance of the B-Line.

3.3 VRM EVALUATION FOR EL CENTRO BLM FIELD OFFICE LANDS (MP 33.8 TO 79.8)

From MP 33.8 to 79.8, Visual Management Classes II and III have been adopted by the El Centro Field Office of the BLM (Larry Caffey, BLM, 2005). Therefore, it is not necessary to proceed through the VRM inventory process, as that has been accomplished by the BLM-RMP process. Table 2.1-2 above describes the Visual Management Class objectives by milepost. Under the current RMP, the B-Line right-of-way is designated as either Class II or Class III for MP 33.8 to 79.8, depending on exact location.

Adjacent features along most of the length of this right-of-way segment include paved highways, paved roads, and desert wash jeep trails, abandoned mines, and electric transmission lines. Over time, the visual contrast of the proposed B-Line will continue to diminish and the visual effect of the installed pipeline will be minimal.

The existing A-Line and the proposed B-Line route are located on the flat desert landscapes of the Pilot Knob Mesa. The right-of-way is seen in the foreground-middleground distance zone. This pipeline route is less than ¼ mile off State Routes 78 or 34 for the majority of the right-of-way on BLM-administered lands from MP 33.8 to 75.2. At approximately MP 75.2, the pipeline crosses under I-8 and from there to its terminus at MP 79.8, it is visible only from desert jeep roads. Even though the pipeline is close to viewers on State Routes 78 and 34, the majority of the pipeline right-of-way landscape is not visible because the valley floor is so flat that it is not discernible. The slight changes in topography make it so the vast majority of this pipeline route will not be visible at all from most of the miles of these highways. Landscapes visible from these highways can be seen for distances of 15- to 20-miles, or greater, and yet the visual impacts for the existing pipeline right-of-way are very low. Views of the pipeline right-of-way from I-8 are negligible.

The greatest visibility of the right-of-way is from the State Route 34 over-crossing bridge of I-8, and the right-of-way is visible as a cleared area adjacent to the highway. Even this clearing does not attract attention, but borrows from the form, line, color and texture of the straight, linear highway.

South of the freeway, the right-of-way is used by the US Border Patrol as a surveillance road, and it is not distinguishable as a pipeline right-of-way. Therefore, the visual contrasts are negligible. At the US/Mexican Border, MP 79.8, the B-Line route will cross under the All-American Canal (AAC).

3.3.1 Key Observation Points for MP 33.8 to 79.8 (El Centro BLM Field Office Lands)

For the A-Line that was constructed in 2002, eight key observation points (KOPs) were established along the pipeline corridor in the spring of 2001 to document the existing landscape setting, as shown in the following Table Q-10 (see photographs in Attachment A). Subsequently, in 2005, photographs were taken from these same KOPs in order to determine the visual effects of the 2002 construction and landscape rehabilitation activities, operation and maintenance activities that may be visually evident, plus any unauthorized OHV usage that may have created a visual disturbance.

Table Q-10: KOP Locations for the A-Line and B-Line					
KOP Number	Approximate Milepost	2001 GPS Location UTM NAD 83 Zone 11N		2005 GPS Location UTM NAD 83 Zone 11N	
		Easting	Northing	Easting	Northing
KOP 1	35.8	706810E	3684937N	706712E	3684758N
KOP 2	36.1	705975E	3684282N	706313E	3684407N
KOP 3	36.6	705800E	3683918N	705717E	3683851N
KOP 4	39	703269E	3681053N	703232E	3680993N
KOP 5	42.2	699577E	3677206N	699959E	3677199N
KOP 6	47.3	698744E	3671498N	698359E	3669365N
KOP 7	47.6	698155E	3668799N	698143E	3668799N
KOP 8	48.3	697649E	3667895N	697596E	3667810N

3.3.2 Comparison of KOP Views – 2002 to 2005

The visual effects of underground pipeline construction are sometimes dramatic, and sometimes unnoticeable, depending on various conditions in the existing landscape and the visual elements of the proposed Project – form, line, color, texture and scale. In the case of underground pipeline construction, operation and maintenance in the flat desert landscape from MP 33.8 to 79.8 with only scattered, low-growing scrub vegetation, very little visual contrast was created. The pairs of photographs in Attachment A are a comparison of pre-construction

existing scenic quality at each KOP, with a corresponding photograph taken from approximately the same location, showing the current scenic quality and visual conditions after construction.

3.3.3 Degree of Contrast

The photographs in Appendix A clearly show that, as seen from KOPs 1-8, there are no introduced contrasts of form, line, color, or texture that were created by the A-Line. Visual results of the B-Line will be the same.

3.3.4 Determining Whether VRM Objectives Are Met

Visual Management Class II and III objectives have been met by the A-Line construction that occurred in 2002 and will be met by the proposed B-Line construction, following implementation of restoration measures.

3.4 IMPACT SUMMARY

The visual effects of the cleared right-of-way vary along the proposed routes, depending on landscape terrain, vegetative patterns, and manmade modifications.

3.4.1 B-Line MP 0.0 to 11.7 and Arrowhead Extension

In the agricultural areas of the Palo Verde Valley, visual impacts will be temporary and very minor. The terrain is flat and agricultural operations will resume following construction. Construction activity will be a short-term visual intrusion to residents along 18th Avenue. Long term-impact will be unnoticeable because the pipeline will, for the most part, be located in county rights-of-way requiring little or no clearing. The crossing of the Colorado River will be accomplished by directional drilling, and setbacks from the river will protect existing vegetation. Therefore, no significant visual impacts will occur. Lands in this route segment are not administered by the BLM, and therefore, have no BLM-VRM classification.

3.4.2 B-Line MP 11.7 to 22.3 (Palm Springs BLM Field Office Lands)

In this flat desert landscape environment, a low degree of visual impact will occur initially and be further reduced over time. Visibility resulting from the very slight contrast in soil color and vegetative pattern between the right-of-way and adjacent areas will be offset by limited viewing afforded by areas with flat to low topographic relief and views that include existing manmade features of electric transmission lines and appurtenant access roads.

3.4.3 B-Line MP 22.3 to 29.7 and 31.5 to 33.8 (Yuma BLM Field Office Lands)

In this desert landscape environment, a low degree of visual impact will occur initially during construction of the B-Line, and after mitigation the weak contrasts will be further reduced over time. Visibility resulting from contrast in soil color and vegetative pattern between the right-of-way and adjacent areas will be partially offset by limited viewing afforded by areas with flat to low topographic relief and views that include existing manmade features, including California State Route 78, jeep trails, and various outfall drains in area. Adjacent features along most of the length of this route segment include paved roads and desert wash jeep trails, levees, canals, electric distribution, and high voltage electric lines. Over time the visual contrast of the proposed Project will continue to diminish and the visual effect of the installed pipeline will be minimal.

The proposed pipeline, at the location proposed, is consistent with the VRM Class III objectives in this area. Under this designation, the existing character of the landscape should be partially retained (Class III), and the overall level of change to the characteristic landscape should be low. The visual impacts resulting from the proposed pipeline will be within these guidelines.

3.4.4 B-Line MP 29.7 to MP 31.5 (Yuma BLM Field Office Lands)

In this route segment, the pipeline will cross hilly to flat terrain with a backdrop created by the steeper slopes of the Palo Verde Mountains to the west. In 2002, site grading to prepare for pipeline installation and maintenance was accomplished during the construction of the A-Line. The visual effects of pipeline construction in this right-of-way were minimal, and generally did not create any visual contrast with the surrounding landscape. Viewing locations and conditions of the B-Line will be the same as for the A-Line. Potential viewing locations include from State Route 78, which is parallel to the proposed pipeline route. Few longitudinal views down the right-of-way occur. Most often, glimpses of the right-of-way can be seen while traveling State Route 78, with the dominant visual feature being the mid distance views of the Colorado River bottom covered by the expanse of thick tamarisk. Tamarisk is a species of low-growing, densely branched evergreen trees that effectively screen the landscape from view. The highway alignment in this area is curvilinear with vertical changes in grade, and the two-lane highway has one single lane in either direction. All of these factors compete with the viewer's attention. Overall, there was not a large degree of visual contrast created by the construction of the A-Line, and construction of the B-Line will result in similar visual effects. Over time the impact will continue to diminish as vegetation softens the few views of the right-of-way.

The existing pipeline alignment was chosen to limit environmental and visual impacts. The Proposed B-Line will be installed 25-feet away from the existing pipeline in the same alignment. There will be no further visual impacts to form, line, color, and texture in the landscape. No visual mitigation is planned beyond the restoration measures proposed (see CMR Plan, Appendix A of the Environmental Report).

3.4.5 B-Line MP 33.8 to 79.8 (El Centro BLM Field Office Lands)

In this desert landscape environment, a very low degree of visual impact will occur initially during construction of the B-Line, and after implementation of mitigation measures, the weak visual contrasts will be further reduced. Visibility resulting from contrast in soil color and vegetative pattern between the right-of-way and adjacent areas will be partially offset by limited viewing afforded by areas with flat to low topographic relief as seen from California State Routes 78 and 34, and I-8.

The proposed pipeline, at the location proposed, is consistent with the VRM Class II and III objectives of this area. Under this designation, the existing character of the landscape should be retained (Class II), and partially retained (Class III), and the overall level of change to the characteristic landscape should be low. The visual impacts resulting from the proposed B-Line pipeline will be within these guidelines.

4.0 IID LATERAL PIPELINE TO EL CENTRO

For the purposes of visual resource management, BLM-administered lands crossed by the IID Lateral can be subdivided into three SQRUs. Those three SQRUs are the Pilot Knob Mesa (MP 0.0 to 0.5), Algodones Dunes (MP 0.5 to 8.1) and the East Mesa (MP 8.1 to 27.6). Following the methodology presented above for the B-Line (see Section 3.0), this report assesses compliance with Visual Resource Management Classes established in BLM RMP and Recreation Area Management Plans (RAMP) for the lands crossed by the IID Lateral (BLM 1980; 2003).

A fourth landscape crossed which is not administered by BLM, is the segment of the pipeline located in the Imperial Valley (MP 27.6 to 45.6).

From MP 0.0 to 7.9, the IID Lateral will cross the Imperial Sand Dunes Recreation Area (ISDRA). The BLM has adopted an objective of Visual Resource Management Classes II and III for the ISDRA by correlating the ISDRA Multiple-Use Classifications with the VRM Classes, as shown in Table Q-11.

Mileposts	BLM Field Office	BLM Multiple-Use Class Designation	Visual Resource Management Class Designation
0.0 – 2.3	El Centro	Limited (L)	VRM Class II
2.3 – 3.0	El Centro	Moderate (M)	VRM Class III
3.0 – 7.9	El Centro	Intensive (I)	VRM Class IV
7.9 – 27.6	El Centro	Limited (L)	VRM Class II

4.1 PILOT KNOB MESA SQRU (MP 0.0 TO 0.5)

The Pilot Knob Mesa was fully described in the analysis of the A-Line and B-Line. The dominant view of the landscape through which the right-of-way passes from MP 0.0 to 0.5 is a flat desert floor, covered with widely scattered creosote bush scrub and will parallel a multitude of overhead electrical transmission lines on wooden poles and steel lattice towers. This portion of the IID Lateral starts at a new Main Line Valve and tap to the mainline near Ogilby Road (MP 74.5 of the B-Line) and ends at the transition to Algodones Dunes (MP 0.5). The VRM Class objective for the Pilot Knob Mesa is Class II, where proposed activities should remain subordinate to the characteristic landscape. Because the proposed IID Lateral will be an underground facility and will parallel existing overhead transmission lines, the proposed Project will create no significant adverse visual effects upon the landscape in the Pilot Know Mesa.

4.1.1 Key Observation Points for MP 0.0 to 0.5 (El Centro BLM Field Office Lands)

There is only one key observation point looking into this segment of the IID Lateral, located on State Route 34 (the Ogilby Road) at the interchange of I-8, looking west through the corridor of overhead transmission lines (Table Q-12). The lateral pipeline will be constructed as an underground facility in a right-of-way adjacent and parallel to existing overhead transmission lines. This freeway interchange has an elevated viewer platform created by the overpass of Ogilby Road. Because this segment of the IID Lateral Pipeline is so short, only one KOP was necessary to determine the visual effects of the proposed Project.

Table Q-12: KOP Location for the IID Lateral through the Pilot Knob Mesa			
KOP Number	Approximate Milepost	2005 GPS Location UTM NAD 83 Zone 11N	
	MP	Easting	Northing
KOP 9	0.3	702642E	3627024N

4.1.2 Degree of Contrast

The basic philosophy underlying visual quality of a landscape depends on the visual contrast created between a project and the existing landscape. For the IID Lateral through the Pilot Knob Mesa, the contrast can be measured by comparing the project features with the major features in the existing landscape. The basic design elements of form, line, color, and texture were used to make this comparison and to describe the visual contrast created by the project. The assessment process provides a means for determining visual impacts and for identifying measures to mitigate these impacts.

4.1.3 Contrast Rating for the Proposed IID Lateral in Pilot Knob Mesa SQRU (MP 0.0 to 0.5)

The proposed IID Lateral from MP 0.0 to 0.5 will cross through the flat desert, open-space landscapes of the Pilot Knob Mesa administered by the BLM, parallel to overhead transmission lines. Following is an assessment of contrasts in form, line, color, and texture that will be caused by the IID Lateral.

Form. Implementation of the proposed IID Lateral will create no changes in landform, as it will be constructed on flat terrain parallel to existing transmission lines. Form contrasts will be weak to none.

Line. Implementation of the proposed IID Lateral will create no changes in line, as the transmission lines right-of-way and IID Lateral right-of-way are parallel and contiguous. Newly created line contrasts will be weak to none.

Color. Implementation of the proposed IID Lateral will create few, if any, changes in color, as it will be constructed parallel to the existing transmission line right-of-way. Lighter colored soils from pipeline construction will be indistinguishable, and not evident, as compared to transmission line access roads, and will result in no additional color contrasts. Orange-colored pipeline markers will be visible at intermittent locations along the pipeline, but will not detract from the visual quality of the area.

Texture. Implementation of the proposed IID Lateral will create few, if any, changes in texture, as it will be constructed parallel to the existing transmission line right-of-way. Therefore, only a slight amount of existing desert vegetation will be disturbed during construction. The amount of texture contrast will be weak to none.

For BLM-administered lands from MP 0.0 to 0.5, visual contrasts created by the construction, operation and maintenance of the IID Lateral will be weak-to-none. There will be little or no visual effects from the IID Lateral to BLM-administered lands.

4.1.4 Determining Whether VRM Objectives Are Met

The contrast ratings were compared with the objectives of VRM Class II. Though experience in construction of the A-Line, it was learned that all of the contrast ratings for landscape elements were “none” or “weak,” and therefore potential contrast of visual elements (form, line, texture and texture) caused by trenching and backfilling for the pipeline construction did not cause any visual contrasts that were unacceptable after implementation of restoration.

The overall contrast rating for the IID Lateral through the Pilot Knob Mesa is “None” to “Weak”. Consequently, the visual resource management objectives for this Class II area will be met by the construction, operation and maintenance of the proposed IID Lateral Pipeline. No mitigation measures are planned beyond the proposed restoration.

4.2 ALGODONES DUNES SQRU (MP 0.0 TO 7.9)

A very unique and interesting landscape feature on BLM-administered lands that will be crossed by the IID Lateral is the Algodones Dunes, also known as the Imperial Sand Dunes Recreation Area (ISDRA).

According to the BLM RAMP, “The ISDRA, located in eastern Imperial County in Southern California, offers outstanding opportunities for OHV recreation within the BLM’s California Desert Conservation Area. The approximately 159,072-acre ISDRA contains the largest mass of sand dunes in California, covering an area more than 40 miles long and averaging 5 miles in width. The ISDRA is considered a world-class OHV area and it represents one of the most popular OHV areas in the western United States. It is a well-known area to local residents and the thousands who visit each year from the southwestern United States and beyond. The ISDRA is the most heavily and intensively used OHV recreation area in the California Desert

District with over 1.4 million OHV visitors per year. In addition, the ISDRA is recognized for its frequent use as a backdrop for commercials and movies because of its unique beauty and landscape. The ISDRA is also recognized for providing unique habitat for several endemic and sensitive plant, insect, and animal species and habitats” (BLM 2003). The RAMP recognizes the unique scenic attributes of the dunes.

Visually evident man-made modifications in the vicinity of the pipeline route in the Algodones Dunes include I-8, the AAC, new Coachella Canal, and several wood-pole and steel-lattice-tower electric transmission lines traversing the Dunes in an east-west direction. The abandoned Coachella Canal to the west and the railroad to the east are not visually prominent man-made features.

According to the ISDRA RAMP, “the proximity of the Imperial Sand Dunes Recreation Area to private land and the wilderness area requires that the BLM carefully manage the recreation, natural, and cultural resources and corresponding resource values (such as “scenic values”) within the planning area to reduce potential impacts to these areas” (BLM 2003).

4.2.1 Existing Scenic Quality

The BLM VRM system utilizes the following factors to establish existing scenic quality: landform, vegetation, water, color, adjacent scenery, scarcity and cultural modifications.

Landform. Regarding landforms, the RAMP adequately explains scenic quality of the Dunes, as follows. “The dune system is situated on a relatively flat plain. The plain has an elevation of approximately 50 feet above sea level. On the west, the plain is called East Mesa because it is east of Imperial Valley. On the east, the plain is called Pilot Knob Mesa. The dunes reach heights of 300 feet above the plain, and include classic examples of several different types of dune morphology. The sand dunes are thought to have originated from the beach sands of ancient Lake Cahuilla, a water body created by episodic diversions of the Colorado River into the Imperial Valley instead of the Gulf of California. The Imperial Dunes have formed primarily as a result of opposing seasonal winds. Winter winds come from the northwest, but often reverse to the southeast in summer. The stronger winter winds are slowly pushing the dune system southeastward. The east and west sides of the dunes system differs substantially in character. West side sands are composed of material that is generally heavier and coarser than the lighter, finer sands carried further east in the prevailing winds. The coarse sands form the largest, tallest dunes, which are located in the western two-thirds of the dune system. These constitute the ‘primary dunes.’ East of the primary dunes are the ‘secondary dunes.’ These dunes are smaller dunes composed of finer sands and having more vegetation cover.”

Vegetation. Vegetation on the dunes is very sparse on the westerly side and top of dunes. East of the primary dunes, and transitioning into the Pilot Knob Mesa, vegetation is widely scattered creosote bush scrub. A corridor of vegetation, mostly non-native, water-loving species, follows the lower banks of the AAC, and creates a pleasant visual contrast of blue, green and tan colors.

Water. The only water in the Algodones Dunes SRQU is found in the All American Canal. The proposed pipeline will cross under the All American Canal and I-8 at approximately MP 2.3 and again at MP 7.9.

Color. Colors exhibited in the IID Lateral right-of-way landscape include light-tan to white sand dunes, gray-green Creosote bush scrub, medium-green, non-native species along the blue waters of the AAC.

Adjacent Scenery. Regarding adjacent scenery, throughout the path of the IID Lateral in the Algodones Dunes, vistas are available to the East Mesa and the Pilot Knob Mesa, especially when the route is slightly elevated from MP 4 to 6. The contrast created by the 300-foot tall sand dunes situated on a flat desert plane is dramatic.

Scarcity. The sand dunes crossed by the IID Lateral are very unique, and comprise the largest dune formations in southwestern United States.

Cultural Modifications. Electrical transmission lines are very visually evident in the vicinity of the proposed pipeline route and as viewed from the I-8 corridor. Additionally, the AAC, I-8, Grays Well Road, Buttercup Campground, Midway Campground, and the Plank Road monument are present and in the immediate vicinity of the proposed pipeline. All of these cultural modifications are very visually evident in the characteristic landscape. Steel lattice towers and wooden pole transmission lines create strong linear contrasts with the horizontal landforms of the dunes, and they extend the entire length of the crossing through this SQRU. This intrusion on the landscape constitutes a noticeable impact to the scenery. A multitude of tracks left in the sand by OHV also have created a visible cultural modification.

4.2.2 Existing Sensitivity Levels

Sensitivity levels are a measure of public concern for landscape scenery. Public lands are assigned high, medium, or low sensitivity levels by analyzing the various indicators of public concern. The factors to be considered in the sensitivity level analysis include type of users, adjacent land uses and other factors.

Type of Users. Visual sensitivity will vary with the type of users. Recreational sightseers may be highly sensitive to any changes in visual quality, whereas workers who pass through the area on a regular basis may not be as sensitive to change. According to the Imperial Dunes RAMP, “the Imperial Sand Dunes Recreation Area (ISDRA) is the most popular OHV area in the southwest United States. It encompasses the most intensively visited recreational area in the California Desert Conservation Area (CDCA). It provides a unique, world-class recreation opportunity” (BLM 2003). The primary recreational use is camping and the use of OHV, principally dune buggies, quads and all terrain vehicles. Camping in recreation vehicles (RVs) and vacation trailers is a predominant use in the Algodones Dunes, also known as the Imperial Sand Dunes Recreation Area. Buttercup Campground, Midway Campground and Dune Buggy Flats receive extreme recreation use; typically 100,000 people or more will recreate on the

dunes during the cooler autumn and winter months. Other recreation uses include utilization of the Rest Area in the median of I-8. Non-recreation uses include canals and roads, filming, conservation activities, and right-of-way use for utility lines.

Adjacent Land Uses. For BLM-administered lands, the land use that surrounds the IID Lateral route through the dunes is dominated in the winter by OHV related uses. Off season, adjacent land uses are those of open-space desert plains. The Plank Road monument is adjacent to the proposed right-of-way but will not be affected by construction, operation or maintenance of the IID Lateral pipeline. There are no agricultural, commercial, residential, or industrial uses anywhere in the vicinity of the IID Lateral and the dunes. There are, however, several utility and infrastructure uses that are located in the same corridor as the proposed IID Lateral. I-8 carries people to the nearest cities, which are El Centro, California and Yuma, Arizona. The AAC parallels and crosses under I-8 and several high voltage electric transmission lines are present.

The number of people using the ISDRA at any one time is extremely high in the cooler months of the year; yet is rather small during the hottest seasons. Recreationists are attracted to the unique scenery, and travelers on I-8 experience the scenery of the dunes as a unique visual relief while traveling through vast expanses of desert plains that exhibit minimal visual variety.

4.2.3 Distance Zones

The visual quality of a landscape may be magnified or diminished by the visibility of the landscape from major viewing routes and key observation points. In the VRM system, therefore, distance plays a key part in visual quality management. Landscapes of the ISDRA were subdivided into three distance zones based on a relative visibility from travel routes or observation points. The three zones are foreground-middleground, background, and seldom seen. Because areas that are closer have a greater effect on the observer, such areas require more attention than do areas that are farther away. Distance zones allow this consideration of the proximity of the observer to the landscape. Because recreationists travel cross-country on OHVs, and I-8 crosses through the dunes, the entire area of the dunes in the vicinity of the IID Lateral is visible as foreground/middleground, giving the greatest exposure and visibility to the landscape.

4.2.4 Determining VRM Classes

As previously stated, visual resource management classes are established through the RMP process for all BLM-administered lands. However, the BLM has not formally inventoried the lands within the ISDRA, nor has it given those lands Visual Management Classifications, according to the VRM Program. However, these ratings were developed based entirely on the multiple use classes in the RAMP-FEIS for the ISDRA (Larry Caffey, BLM, 2005).

The BLM currently manages the lands within the ISDRA according to the Multiple-Use Classes listed in the CDCA. VRM Class V was not assigned to any of the Multiple-Use Classes because

none of the lands in the ISDRA have been degraded to the point where they require rehabilitation.

Figure 3.7-1 in the RAMP FEIS depicts the VRM Classes associated with the Multiple-Use Classes that are assigned to ISDRA lands by management areas. Although the management areas do not exactly fall within the multiple use class, geographically, the following table will provide a general overall classification of the management areas as a whole. (However, a visual assessment conducted without regard to the multiple use class may result in different classifications, such as Mammoth Wash Management Area will most likely be VRM Class II.) As shown in Table Q-13, the popular dune areas and campgrounds within the ISDRA also can be categorized according VRM Classes.

Table Q-13: Visual Resource Management Classes of OHV Use and Camping Areas			
VRM Class I	VRM Class II	VRM Class III	VRM Class IV
North Algodones Dunes Wilderness	Dune Buggy Flat Management Area	Glamis Management Area	Mammoth Wash Management Area
	Adaptive Management Area		Buttercup Management Area
	Ogilby Management Area		Gecko Management Area

Visual Management Classes for IID Lateral in Algodones Dunes. Based on Multiple-Use Classes in the ISDRA-RAMP, the visual management class for the IID Lateral in the Algodones Dunes SQRU is Class II. In Class II landscapes, changes in any of the basic elements (form, line, color, texture) caused by the proposed Project should not be evident in the characteristic landscape. Contrasts can be visible, but must not attract attention.

From MP 0.0 to 7.9, the proposed IID Lateral will cross under open-space sand dunes, OHV recreation sites, campgrounds in the dunes, and will directionally drilled and/or bored under the All American Canal and I-8 at several locations.

4.2.5 Key Observation Points.

Contrast ratings were done from the most critical viewpoints in the Imperial Dunes Recreation Area. In 2005, five key observation points were established along the proposed IID Lateral pipeline corridor (see Table Q-14), and photographs were taken from these KOPs in order to analyze in detail the potential visual effects of the construction, operation, maintenance, and landscape rehabilitation activities (see Attachment B).

Table Q-14: Key Observation Point Locations in the Algodones Dunes SQRU			
KOP Number	Approximate Milepost	2005 GPS Location UTM NAD 83 Zone 11N	
		Easting	Northing
KOP 10	1.8	700250E	3625979N
KOP 11	3.5	698466E	3624346N
KOP 12	6.5	697399E	3623878N
KOP 13	5.3	695770E	3622776N
KOP 14	6.5	694831E	3621331N

As seen from KOP 10, the IID Lateral will enter the Algodones Dunes SQRU at the location where the landscape transitions from the flat mesa to the beginning of the small dunes at MP 0.5. The pipeline will be drilled and bored under both the AAC and I-8 freeway. The horizontal directional drill (HDD) pullback area is partially screened from view by the landforms of the sand dunes. After construction, there will be no visual effect of the pipeline as seen from KOP 10.

As seen from KOP 11, the proposed IID Lateral will be constructed adjacent to and parallel to the H-frame wooden transmission lines. The pipeline will be placed in a trench dug in the sand, and then backfilled. Because of the blowing and drifting nature of the sand, there will be no visible evidence of construction shortly after construction. No-evidence will remain of the pipeline after construction.

KOPs 12 to 14 are located on the south side of I-8, looking from Gray's Well Road. As seen from KOP 12, the pipeline will be located north of both the Gray's Well Road and the H-frame wooden poles, and adjacent to the I-8 right-of-way. The pipeline will be placed in a trench dug in the sand, and then backfilled. Because of the blowing and drifting nature of the sand, there will be no visible evidence of construction shortly after construction. No-evidence will remain of the pipeline a short time after construction. The only above-ground facility of the pipeline in the Algodones Dunes will be Mainline Valve No. 2 which will be located at MP 7.6. The valve will be visually evident, but in an area of limited public access between I-8 and the ACC.

As seen from KOP 13, there is a large area of sand dunes between Gray's Well Road and I-8, in which an H-frame transmission line runs parallel to I-8. The sand dunes on the horizon to the north of the freeway are covered with widely scattered, low-growing scrub brush. The pipeline will be placed in a trench dug in the sand, and then backfilled. Because of the blowing and drifting nature of the sand, there will be no visible evidence of construction shortly after construction.

As seen from KOP 14, the proposed pipeline will cross under the AAC at the western edge of the Algodones Dunes. From this vantage point, the expansive, horizontal landscapes of the East Mesa are visible. The tall single-mast tower, visible between the H-frame transmission pole and the white vacation-trailer on I-8, is located at the junction of the Coachella Canal and the

AAC. The proposed pipeline laydown area will be in the creosote scrub bush area almost directly behind the H-frame transmission pole.

On the south side of the ACC, landforms are flat to gently sloping, tan colored sand. The vegetation is widely scattered low growing gray-green creosote bush scrub and gray-green sage. After construction, there will be no visible evidence of the IID Lateral from KOP 14, because wind-driven sand, and extensive OHV use will obliterate any trace of construction activities.

On the north side of the ACC, the pipeline laydown area will be cleared and the pipeline will be placed by HDD. The trench will then be backfilled. Because of the blowing and drifting nature of the sand, there will be very little to no visual evidence of the pipeline shortly after construction.

4.2.6 Contrast Rating for the Proposed IID Lateral in ISDRA SQRU (MP 0.0 to 7.9)

The contrast rating of the proposed IID Lateral pipeline through the Algodones Dunes was completed by determining the degree of contrast (i.e., strong, moderate, weak, or none) for each element (form, line, color and texture). The general criteria and factors in Table Q-9 were used when rating the degree of contrast:

Form. Implementation of the proposed IID Lateral will create no changes in landform, as it will be constructed in the sand dunes of the ISDRA, all of which rapidly reform and re-sculpt during wind storms. There will be no form contrasts.

Line. Implementation of the proposed IID Lateral will create no changes in line, as the pipeline will be buried and sand dunes will be re-sculpted by winds on a regular basis. There will be no line contrasts.

Color. Implementation of the proposed IID Lateral will create no changes in color, as the natural colors of sand dunes will be dominant after construction, resulting in weak to no color contrasts. Orange-colored pipeline markers will be visible at intermittent locations along the pipeline, but will not detract from the visual quality of the area.

Texture. Implementation of the proposed IID Lateral will create no changes in texture, as it will be constructed in sand dunes parallel to the existing transmission line right-of-way. The amount of texture contrast will be none.

For BLM-administered lands from MP 0.0 to 7.9, visual contrasts created by the construction, operation and maintenance of the IID Lateral will be weak-to-none. There will be little or no visual effects from the IID Lateral to BLM-administered lands.

4.2.7 Determining Whether VRM Objectives Are Met

The contrast ratings were compared with the objectives for the VRM Classes II and III in the ISDRA RAMP. The potential contrast of visual elements (form, line, texture and texture) caused by trenching and backfilling for the pipeline construction will not cause any visual contrasts that will be unacceptable after implementation of mitigation measures. The sand dunes have a much higher visual absorption capability than the rocky desert landscapes that were traversed in 2002 by construction of the A-Line. The period of time that it will take to “heal the landscape” in the dunes is extremely short, because of wind-driven sand and wheel traffic of OHV users.

Therefore, the overall contrast rating for the IID Lateral through the Algodones Dunes SQRU is “None” to “Weak.” Consequently, the visual resource management objectives for this VRM Class II and III area will be met by the construction, operation and maintenance of the proposed IID Lateral Pipeline.

Because there will not be a significant visual impact created by pipeline construction, operation or maintenance in the Algodones Dunes, no mitigation measures are needed.

4.3 EAST MESA SQRU (MP 7.9 TO 27.6)

The dominant view of the landscape through which the IID Lateral passes is an extensive, visually flat desert plain covered with creosote bush scrub. There are no interesting landscape features on BLM-administered lands in the East Mesa, only a flat landform, uniform brush cover, no water, no rock outcrops. Background views to the east reveal the Chocolate Mountain Range in the background of the Lateral, and views to the east reveal a flat plain on the horizon.

4.3.1 Existing Scenic Quality

The BLM VRM system utilizes the following factors to establish existing scenic quality: landform, vegetation, water, color, adjacent scenery, scarcity and cultural modifications.

Landform. Regarding landform, the valley floor generally slopes from northeast to southwest, but it is visually flat and monotonous. A small amount of elevation change was observed during field investigations, but the general public will perceive this landscape as extremely “flat.”

Vegetation. The vegetative pattern on the East Mesa is uniformly scattered, low-growing and sparse, gray-green creosote bush scrub. There is little or no contrast in vegetation within the East Mesa SQRU.

Water. No water was observed within the East Mesa SQRU along the IID Lateral.

Colors. Colors exhibited in the IID Lateral landscape include tan sand flats and gray-green scrub brush. Overall, for the majority of the year, there are only subtle color variations, little- to no-visual contrast or interest.

Adjacent Scenery. Regarding adjacent scenery, throughout the entire path of the IID Lateral, there is little to no variation from that of flat, barren desert scrub.

Scarcity. The desert floor scenery crossed by the IID Lateral is very common within the southeastern region of California Desert, and is almost archetypical of the public's perception of "desert." The East Mesa has all the typical appearance of the desert landscape dominated by creosote bush scrub and flat desert landscapes. There are no unique or scarce viewsheds crossed by the right-of-way.

Cultural Modifications. Electrical transmission lines, communications and cell-phone towers can be seen from certain viewpoints within sight of the IID Lateral. These intrusions in the landscape constitute a minor impact to the scenery.

Overall, no exceptionally striking, intriguing, unique, or visually stimulating landforms, vegetative communities, water-bodies, colors, or adjacent scenery landscapes are crossed by the IID Lateral.

4.3.2 Existing Sensitivity Levels

Type of Users. The users of East Mesa can generally be characterized as motorists traveling on I-8. I-8 carries interstate traffic between San Diego, California to the west and Phoenix, Arizona to the east. Additionally, it carries local traffic between El Centro, California to the west and Yuma, Arizona to the east. Users also exit at Gordon's Well to access the nearby campground, Dune Buggy Flats and the RV Park.

Adjacent Land Uses. For BLM-administered lands, the land use that surrounds of the Project right-of-way is that of open-space desert and the East Mesa Area of Critical Environmental Concern. The only commercial or residential uses located near this Project site are Pair-A-Dice (a roadside establishment), Gordon's Well RV Park, and the deserted Brock Research Center, all of which are located on Evan Hewes Highway immediately adjacent to I-8.

4.3.3 Distance Zones

Following the distance zone criteria given for previous SQRUs, it was determined that all of the IID Lateral right-of-way from MP 8.1 to 27.6 will be in the foreground-midground distance zone of I-8 and Evan Hewes Highway. Because areas that are closer to observers have a greater potential for adverse visual effects, such areas require more attention than do areas that are farther away. Distance zones allow this consideration of the proximity of the observer to the landscape.

4.3.4 Determining VRM Classes

As previously stated, visual resource management classes are established through the RMP process for all BLM-administered lands, but the BLM has not adopted any visual management classes for East Mesa. Therefore, visual resource management classes are correlated to the Multiple-Use Classes for the East Mesa (Larry Caffey, BLM, 2005). The proposed IID Lateral Pipeline will cross the East Mesa following Evan Hewes Highway on open-space desert lands administered by the BLM.

4.3.5 Key Observation Points.

The contrast rating was prepared from the most critical viewpoints: I-8, Evan Hewes Road, Pair-A-Dice and Gordon's Well RV Park (Table Q-15).

Table Q-15: Key Observation Point Location for the IID Lateral at East Mesa			
KOP Number	Approximate Milepost.	2005 GPS Location UTM NAD 83 Zone 11N	
		Easting	Northing
KOP 15	8.5	691478E	3620934N
KOP 16	8.6	691309E	3620998N
KOP 17	8.5	691478E	3620934N
KOP 18	20.6	672517E	3623169N

As seen from KOP 15, the IID Lateral Pipeline will enter the East Mesa SQRU near the Gordon's Well exit of I-8. The pipeline will be directionally drilled under the AAC from this location. The site where the pipeline construction will occur has no occupancy, no topographic relief, only scattered creosote bush scrub, no rockforms and no water features.

On the north side of the AAC, the pipeline laydown area will be cleared and the pipeline will be placed by HDD. The trench will then be backfilled. Because of the blowing and drifting nature of the sand and the rapid regeneration of sand dune vegetative communities, there will be very little- to no-visual evidence of the pipeline shortly after construction.

As seen from KOP 16, the Pair-A-Dice roadside establishment is a local landmark, comprised of paved parking, spent-military shells as parking barriers, grass-thatched roof over outdoor seating, and a restaurant-bar. The large tower to the right is a cell phone tower. The proposed IID Lateral will be located at the south edge of the pavement of Evan Hewes Highway, in front of the restaurant/bar. Once the pipeline is installed and the road repaved, the pipeline will not be visible from this vantage point. This view is looking toward the northwest.

As viewed from Evan Hewes Highway at KOP 17, looking northwest, Gordon's Well RV Park is a pleasant landscape setting in the desert that offers tall, green shade trees, paved roads, colorful red and pink flowering shrubs, and green lawns. The proposed IID Lateral will be located at the edge of pavement of the Evan Hewes Highway, and after construction and road repaving, the pipeline will not be visible.

For the next approximately 19 miles the IID Lateral will be constructed at the south and then north edge of pavement of Evan Hewes Highway, on BLM-administered land, as shown in KOP 18. Soil color is light-tan and vegetation is widely scattered, light-green creosote bush scrub. There are no rock formations or water features in this desert landscape of sameness. Because of the high winds in this area, the drifting nature of the desert sands, and the wide spacing of the creosote bush scrub, there will be very little to no visual evidence of the pipeline shortly after construction. Likewise, because of access afforded by Evan Hewes Road, the operation and maintenance of the proposed IID Lateral will have no adverse effect on the visual resources of these BLM-administered lands.

4.3.6 Degree of Contrast

The rating is completed by determining the degree of contrast (*i.e.*, strong, moderate, weak, or none) for each element. The general criteria and factors shown in Table Q-9 are used when rating the degree of contrast:

Form. Implementation of the proposed IID Lateral will create no changes in landform, as it will be constructed on flat terrain parallel to Evan Hewes Road and I-8. There will be no form contrasts.

Line. Implementation of the proposed IID Lateral will create no changes in line, as the IID Lateral right-of-way will be parallel to Evan Hewes Road. There will be no line contrasts.

Color. Implementation of the proposed IID Lateral will create few, if any, changes in color, as it will be constructed parallel to Evan Hewes Road and I-8. Minimal vegetative clearing of the right-of-way and lighter colored soils from pipeline construction will create weak-to-no color contrasts. Orange-colored pipeline markers will be visible at intermittent locations along the pipeline, but will not detract from the visual quality of the area.

Texture. Implementation of the proposed IID Lateral will create few, if any, changes in texture, as it will be constructed parallel to Evan Hewes Road and I-8. Therefore, only a slight amount of existing desert vegetation will be disturbed during construction. The amount of texture contrast will be weak to none.

For BLM-administered lands from MP 7.9 to 27.6, visual contrasts created by the construction, operation and maintenance of the IID Lateral will be weak-to-none. There will be little or no visual effects from the IID Lateral to BLM-administered lands.

4.3.7 Determining Whether VRM Objectives Are Met

The contrast ratings are compared with the VRM objectives for the East Mesa. For comparative purposes, the four levels of contrast (i.e., none, weak, moderate, and strong) roughly correspond with VRM Classes I, II, III, and IV respectively.

Though experience in construction of the North Baja Pipeline in 2002 (A-Line), it was learned that all of the contrast ratings for landscape elements were “none” or “weak,” and therefore potential contrast of visual elements (form, line, texture and texture) caused by trenching and backfilling for the pipeline construction did not cause any visual contrasts that were unacceptable after implementation of mitigation measures. The landscapes that will be crossed by the IID Lateral are even more uniform than those crossed in 2002 by the A-Line, and therefore, it was determined that the visual effects will be “None”.

Consequently, the visual resource management objectives for this area in East Mesa will be met by the proposed Project. Because there will not be a significant visual impact created by pipeline construction, operation or maintenance in the East Mesa, no mitigation measures are needed beyond those proposed for restoration.

4.4 IMPACT SUMMARY

IID Lateral MP 0.0 to MP 7.9 – The approximately 159,072-acre ISDRA contains the largest mass of sand dunes in California, covering an area more than 40 miles long and averaging 5 miles in width. The ISDRA is considered a world-class OHV area and it represents one of the most popular OHV areas in the western United States. In addition, the ISDRA is recognized for its frequent use as a backdrop for commercials and movies because of its unique beauty and landscape. Very little vegetation is present due to intense OHV use. Manmade modifications in the vicinity of the pipeline route in the Algodones Dunes include I-8, the AAC, new Coachella Canal, and several wood-pole and steel-lattice-tower electric transmission lines traversing the Dunes in an east-west direction. Moreover, wind-deposited sand is expected to mask most remaining visual evidence of the right-of-way within a relatively short period following construction. The VRM objectives for this area in the Algodones Dunes pipeline segment will be met by the proposed Project. Consequently, because there will not be a significant visual impact created by pipeline construction, operation, or maintenance, no mitigation measures are needed beyond those implemented during construction of the A-Line. Effectiveness will be similar.

IID Lateral MP 7.9 to 27.6 – The landscapes that will be crossed by the IID Lateral through the East Mesa are even more uniform than those crossed in 2002 by the A-Line. In this desert landscape environment, a low degree of visual impact will occur initially and be further reduced over time. Adjacent features along most of the length of this route segment include electric distribution and paved roads. Long term impact will be unnoticeable because the pipeline will for the most part be located in county rights-of-way requiring little or no clearing. The VRM objectives for this area in the East Mesa will be met by the proposed Project. Consequently, because there will not be a significant visual impact created by pipeline construction, operation

or maintenance in the East Mesa, no mitigation measures are needed beyond those implemented during construction of the A-Line. Effectiveness will be similar.

IID Lateral MP 27.6 to 45.6 – In the agricultural areas of the Imperial Valley, visual impacts will be temporary and very minor. The terrain is flat and agricultural operations will resume following construction. Construction activity will be a short-term visual intrusion to residents along county roadways. Long-term impact will be unnoticeable because the pipeline will for the most part be located in county rights-of-way requiring little or no clearing. Lands in this route segment are not administered by the BLM, and therefore, have no BLM VRM classification.

5.0 ARROWHEAD EXTENSION

The Arrowhead Extension is a 2.1-mile pipeline located between MP 7.4 of the proposed B-Line and SoCalGas' existing Blythe Compressor Station. The terrain is flat and uniform with a mix of agricultural and rural residential landscapes on both sides of Arrowhead Boulevard.

Construction activity would create a short-term visual intrusion along Arrowhead Boulevard.

There would be no long-term impact on visual resources in this area because little or no vegetation clearing would be required where the pipeline would be installed within the right-of-way associated with Arrowhead Boulevard, and agricultural operations would resume following construction where the pipeline would be outside the road right-of-way. The lands affected by the Arrowhead Alternative are not managed by the BLM and do not have a VRM classification. No mitigation measures are warranted or proposed.

6.0 ABOVEGROUND FACILITIES

Two new and separate aboveground facilities are proposed: the Blythe-Arrowhead and El Centro Meter Stations. Other aboveground facilities will be modified, but the incremental visual change will likely be unnoticeable. Construction of the aboveground facilities will also have a temporary impact on visual resources. The Blythe-Arrowhead Meter Station is a new aboveground facility. It will be located within SoCalGas' existing site associated with its Blythe Compressor Station. The aboveground structures will be painted to match the surroundings. Because the facility is not located on BLM land, it does not have a VRM classification.

The El Centro Meter Station is a new aboveground facility that will be located in the fenced yard of the existing El Centro Generating Station. It will be a minor industrial addition to a much larger industrial complex. Because the facility is not located on BLM land, it does not have a VRM classification.

The existing Ogilby Meter Station, located in the open desert near I-8, affects the surrounding visual landscape. The presence of construction crews/equipment will be a minor visual disruption. All modifications will be at or near ground level and be visually unobtrusive. The VRM designation for this site, located on BLM-administered land, is Class II. After construction is complete, modifications to the existing Ogilby Meter Station will not be visually evident to casual observers.

During modifications associated with the Ehrenberg Compressor Station, the presence of construction workers and equipment in the Project area will be a minor detraction. All modifications will be at or near ground level and be visually unobtrusive. Because the facility is not located on BLM land, it does not have a VRM classification.

There will be little impact to visual resources resulting from the expansion of the B-Line, new laterals, or aboveground facilities. The right-of-way created by construction of the A-Line has recovered significantly since construction was completed in 2002. Construction of the B-Line will result in an incremental impact that is expected to recover in a similar manner. Pipeline markers will be visible at intermittent locations along the pipeline, but will not detract from the visual quality of the area. The Project will not have a substantial effect on a scenic vista or substantially damage scenic resources within a state scenic highway because none exist in the Project area. Although aboveground facilities will use small floodlights on site, they will not create a new source of substantial light or glare that will adversely affect day or nighttime views in the area.

7.0 REFERENCES

BLM (Bureau of Land Management). 1980 (as amended). California Desert Conservation Area Plan. Latest amendment 1999.

BLM 1986a. Visual Resource Inventory. Handbook 8410-1. Available online at:
<http://www.blm.gov/nstc/vrm/8410.html>.

BLM. 1986b. Visual Resource Contrast Rating. Handbook 8431-1. Available online at:
<http://www.blm.gov/nstc/vrm/vrmsys.html>.

BLM. 1987. Final Yuma District Resource Management Plan (RMP) and Environmental Impact Statement (EIS).

BLM. 2000. Visual Resource Management. Available online at:
<http://www.blm.gov/nstc/VRM/vrmsys.html>.

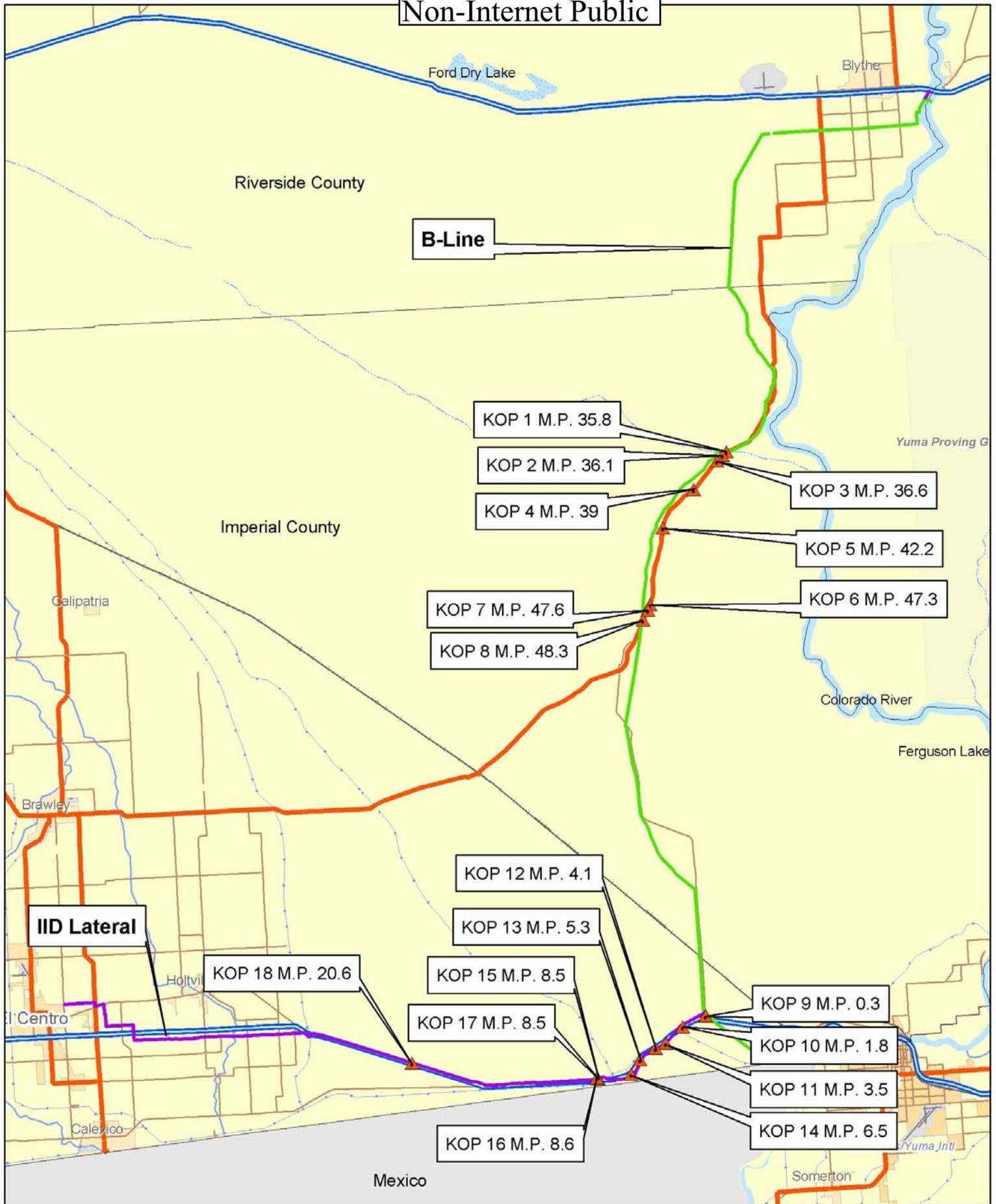
BLM. 2003. Imperial Sand Dunes Recreation Area Management Plan (RAMP). May.

BLM. 2004. Personal communication with Jim Foote, BLM, with Lee Anderson, Tetra Tech EC, Inc. June.

BLM. 2005. Personal communication with Jamie Neilans and Larry Caffey, BLM, with James Nickerson, Andrea Slusser, and Lee Anderson, Tetra Tech EC, Inc. September.

BLM. 2006. Personal communication with Aaron Curtis, BLM, with Lee Anderson, Tetra Tech EC, Inc. January.

FIGURE Q-1
KOP LOCATIONS ALONG THE B-LINE AND IID LATERAL



Legend

- ▲ IID & NBP KOP Locations
- B-Line
- IID Lateral

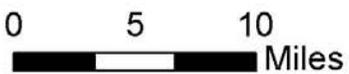


Figure Q-1
KOP Locations Along the B-Line and IID Lateral

ATTACHMENT A
A-LINE (2001) AND B-LINE (2005) KOP PHOTOS

ATTACHMENT B
IID LATERAL (2005) KOP PHOTOS